



Billing Code: 5001-06

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 19-50]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense.

ACTION: Arms sales notice.

SUMMARY: The Department of Defense is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT: Karma Job at karma.d.job.civ@mail.mil or (703) 697-8976.

SUPPLEMENTARY INFORMATION: This 36(b)(1) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives, Transmittal 19-50 with attached Policy Justification and Sensitivity of Technology.

Dated: December 10, 2019.

Aaron T. Siegel,

*Alternate OSD Federal Register Liaison Officer,
Department of Defense.*



DEFENSE SECURITY COOPERATION AGENCY
201 12TH STREET SOUTH, SUITE 101
ARLINGTON, VA 22202-5408

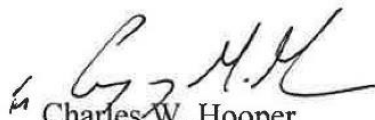
AUG 20 2019

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Madam Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 19-50 concerning the Air Force's proposed Letter(s) of Offer and Acceptance to the Taipei Economic and Cultural Representative Office in the United States (TECRO) for defense articles and services estimated to cost \$8.0 billion. After this letter is delivered to your office, we plan to issue a news release to notify the public of this proposed sale.

Sincerely,


Charles W. Hooper
Lieutenant General, USA
Director

Enclosures:

1. Transmittal
2. Policy Justification
3. Sensitivity of Technology

Transmittal No. 19-50

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act, as amended

(i) Prospective Purchaser: Taipei Economic and Cultural Representative Office in the United States (TECRO)

(ii) Total Estimated Value:

Major Defense Equipment*	\$5.1 billion
Other	<u>\$2.9 billion</u>
TOTAL	\$8.0 billion

(iii) Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:

Major Defense Equipment (MDE):

Sixty-six (66) F-16C/D Block 70 Aircraft
Seventy-five (75) F110 General Electric Engines (includes 9 spares)
Seventy-five (75) Link-16 Systems (includes 9 spares)
Seventy-five (75) Improved Programmable Display Generators (iPDG) (includes 9 spares)
Seventy-five (75) APG-83 Active Electronically Scanned Array (AESA) Radars (includes 9 spares)
Seventy-five (75) Modular Mission Computers 7000AH (includes 9 spares)
Seventy-five (75) LN-260 Embedded GPS/INS (includes 9 spares)
Seventy-five (75) M61 Vulcan 20mm Guns (includes 9 spares)
One-hundred thirty-eight (138) LAU-129 Multipurpose Launchers
Six (6) FMU-139D/B Fuze for Guided Bombs
Six (6) FMU-139D/B Inert Fuze for Guided Bombs
Six (6) FMU-152 Fuze for Guided Bombs
Six (6) MK-82 Filled Inert Bombs for Guided Bombs
Three (3) KMU-572 Joint Direct Attack Munition (JDAM) Tail Kits, GBU-38/54

Non-MDE:

Also included are seventy-five (75) AN/ALE-47 Countermeasure Dispensers (includes 9 spares); one-hundred twenty (120) ALE-50 towed decoy or equivalent; seventy-five (75) APX-126 Advanced Identification Friend or Foe (includes 9 spares); seventy-five (75) AN/ALQ-211 A(V)4 Airborne Integrated Defensive Electronic Warfare Suite (AIDEWS) or equivalent (includes 9 spares); EW Line Replaceable Unit (LRU) and Standard Electronic Module (SEM) spares; one hundred fifty (150) ARC-238 radios (includes 18 spares); Secure Communications and Cryptographic Appliques including seventy-three (73) KIV-78 cryptographic COMSEC devices, and ten (10) AN/PYQ-10 Simple Key Loaders (SKLs) for COMSEC; three (3) Joint Mission Planning Systems (JMPS); twenty-seven (27) Joint Helmet Mounted Cueing Systems (JHMCS) II with Night Vision Device (NVD)

compatibility or Scorpion Hybrid Optical-based Inertial Tracker (HObIT) helmet mounted cueing system with NVD compatibility; seventy (70) NVDs; six (6) NVD spare image intensifier tubes; Cartridge Actuated Devices/Propellant Actuated Devices (CAD/PAD); cartridges; chaff; flares; three (3) each DSU-38A/B Precision Laser Guidance Sensor (PLGS) for GBU-54 Laser Joint Direct Attack Munition (LJDAM) integration; PGU- 28A/B 20mm ammunition; telemetry units for integration and test; bomb components; twenty (20) ground debriefing stations; Electronic Combat International Security Assistance Program (ECISAP) support including EW database and Mission Data File (MDF) development (classified/unclassified); communications equipment; classified/unclassified spares, repair, support equipment, test equipment, software delivery/support, personnel training, training equipment, flight/tactics manuals, publications and technical documentation; bomb racks; Organizational, Intermediate and Depot level tooling; Pilot Life Support Equipment (PLSE); Alternate Mission Equipment (AME); ground training devices (including flight and maintenance simulators); containers; development, integration, test and engineering, technical and logistical support of munitions; aircraft ferry; studies and surveys; construction services; U.S. Government and contractor engineering, technical and logistical support services; and other related elements of logistics, program and sustainment support.

(iv) Military Department: Air Force (TW-D-QCA)

(v) Prior Related Cases, if any: TW-D-SKA, TW-D-QBZ

(vi) Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None

(vii) Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold: See Attached Annex

(viii) Date Report Delivered to Congress: August 20, 2019

*As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Taipei Economic and Cultural Representative Office in the United States (TECRO) – F-16C/D Block 70 Aircraft

TECRO has requested to purchase sixty-six (66) F-16C/D Block 70 aircraft; seventy-five (75) F110 General Electric Engines (includes 9 spares); seventy-five (75) Link-16 Systems (includes 9 spares); seventy-five (75) Improved Programmable Display Generators (iPDG) (includes 9 spares); seventy-five (75) APG-83 Active Electronically Scanned Array (AESA) Radars (includes 9 spares); seventy-five (75) Modular Mission Computers 7000AH (includes 9 spares); seventy-five (75) LN-260 Embedded GPS/INS (includes 9 spares); seventy-five (75) M61 Vulcan 20mm Guns (includes 9 spares); one-hundred thirty-eight (138) LAU-129 Multipurpose Launchers; six (6) FMU-139D/B Fuze for Guided Bombs; six (6) FMU-139D/B Inert Fuze for Guided Bombs; six (6) FMU 152 Fuze for Guided Bombs; six (6) MK-82 Filled Inert Bombs for Guided Bombs; and three (3) KMU-572 Joint Direct Attack Munition (JDAM) Tail Kits, GBU-38/54. Also included are seventy-five (75) AN/ALE-47 Countermeasure Dispensers (includes 9 spares); one-hundred twenty (120) ALE-50 towed decoy or equivalent; seventy-five (75) APX-126 Advanced Identification Friend or Foe (includes 9 spares); seventy-five (75) AN/ALQ-211 A(V)4 Airborne Integrated Defensive Electronic Warfare Suite (AIDEWS) or equivalent (includes 9 spares); EW Line Replaceable Unit (LRU) and Standard Electronic Module (SEM) spares; one hundred fifty (150) ARC-238 radios (includes 18 spares); Secure Communications and Cryptographic Appliques including seventy-three (73) KIV-78 cryptographic COMSEC devices, and ten (10) AN/PYQ-10 Simple Key Loaders (SKLs) for COMSEC; three (3) Joint Mission Planning Systems (JMPS); twenty-seven (27) Joint Helmet Mounted Cueing Systems (JHMCS) II with Night Vision Device (NVD) compatibility or Scorpion Hybrid Optical-based Inertial Tracker (HOBIT) helmet mounted cueing system with NVD compatibility; seventy (70) NVDs; six (6) NVD spare image intensifier tubes; Cartridge Actuated Devices/Propellant Actuated Devices (CAD/PAD); cartridges; chaff; flares; three (3) each DSU-38A/B Precision Laser Guidance Sensor (PLGS) for GBU-54 Laser Joint Direct Attack Munition (LJDAM) integration; PGU-28A/B 20mm ammunition; telemetry units for integration and test; bomb components; twenty (20) ground debriefing stations; Electronic Combat International Security Assistance Program (ECISAP) support including EW database and Mission Data File (MDF) development (classified/unclassified); communications equipment; classified/unclassified spares, repair, support equipment, test equipment, software delivery/support, personnel training, training equipment, flight/tactics manuals, publications and technical documentation; bomb racks; Organizational, Intermediate and Depot level tooling; Pilot Life Support Equipment (PLSE); Alternate Mission Equipment (AME); ground training devices (including flight and maintenance simulators); containers; development, integration, test and engineering, technical and logistical support of munitions; aircraft ferry; studies and surveys; construction services; U.S. Government and contractor engineering, technical and logistical support services; and other related elements of logistics, program and sustainment support. The total estimated program cost is \$8.0 billion.

This proposed sale is consistent with U.S. law and policy as expressed in Public Law 96-8.

This proposed sale serves U.S. national, economic, and security interests by supporting the

recipient's continuing efforts to modernize its armed forces and to maintain a credible defensive capability. The proposed sale will help improve the security of the recipient and assist in maintaining political stability, military balance, and economic progress in the region.

This proposed sale will contribute to the recipient's capability to provide for the defense of its airspace, regional security, and interoperability with the United States. The recipient currently operates the F-16A/B. The recipient will have no difficulty absorbing this aircraft and services into its arms forces.

The proposed sale of this equipment and support will not alter the basic military balance in the region.

The principle contractor will be Lockheed Martin, headquartered in Bethesda, MD. There are no known offset agreements proposed. The purchaser typically requests offsets. Any offset agreement would be defined in negotiations between the purchaser and the contractor(s).

Implementation of this proposed sale will require assignment of a small number of U.S. Government representatives (less than 20) and a modest number of contractor representatives to the recipient to manage the fielding and training for the program.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Transmittal No. 19-50

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act

Annex
Item No. vii

(vii) Sensitivity of Technology:

1. The F-16 Block 70 weapon system is unclassified, except as noted below. The aircraft utilizes the F-16 airframe and features advanced avionics and systems. It contains the General Electric F110-129 engine, AN/APG-83 radar, digital flight control system, embedded internal global navigation system, Joint Helmet Mounted Cueing Systems (JHMCS) II or may include Scorpion Hybrid Optical-based Inertial Tracker (HOBIT) with or without Night Vision Device (NVD) capability, internal and external electronic warfare equipment, Advanced IFF, LINK-16 datalink, operational flight trainer, and software computer programs.

2. Sensitive and/or classified (up to SECRET) elements of the proposed F-16 Block 70 include hardware, accessories, components, and associated software: Link 16 and ESHI Terminals, Multipurpose Launcher (LAU-129), AN/ALQ-21 I A(V)4 AIDEWS EW system or equivalent, Advanced Identification Friend or Foe (AIFF), Cryptographic Appliques (KIV-78), Dual-Band AN/ARC-238 UHF/VHF Radios, Joint Mission Planning System, F-16 Block 70 Simulator, Avionics I-Level Test Station, F110 engine infrared signature, and Advanced Interference Blanker Unit. Additional sensitive areas include operating, tactics manuals, and maintenance technical orders containing performance information, operating and test procedures, and other information related to support operations and repair. The hardware, software, and data identified are classified to protect vulnerabilities, design and performance parameters and other similar critical information.

3. AN/APG-83 is an Active Electronically Scanned Array (AESA) radar upgrade for the F-16. It includes higher processor power, higher transmission power, more sensitive receiver electronics, and Synthetic Aperture Radar (SAR), which creates higher-resolution ground maps from a greater distance than existing mechanically scanned array radars (e.g., APG-68). The upgrade features an increase in detection range of air targets, increases in processing speed and memory, as well as significant improvements in all modes. The highest classification of the radar is SECRET.

4. Link-16 is a command, control, communications, and intelligence (C3I) system incorporating high-capacity, jam-resistant, digital communication links for exchange of near real-time tactical information, including both data and voice, among air, ground, and sea elements.

5. Joint Helmet Mounted Cueing System II (JHMCS II) is a modified HGU-55/P helmet that incorporates a visor-projected Heads-Up Display (HUD) to cue weapons and aircraft sensors to air and ground targets. This system projects visual targeting and aircraft performance

information on the back of the helmet's visor, enabling the pilot to monitor this information without interrupting his field of view through the cockpit canopy. This provides improvement for close combat targeting and engagement. Hardware is UNCLASSIFIED; technical data and documents are classified up to SECRET.

6. Joint Mission Planning System (JMPS) is a multi-platform PC based mission planning system. JMPS hardware is UNCLASSIFIED but the software is classified up to SECRET.

7. AN/ALQ-211 A(V)4 Airborne Integrated Defensive Electronic Warfare Suite (AIDEWS) or equivalent provides passive radar warning, wide spectrum Radio Frequency (RF) jamming, and control and management of the entire Electronic Warfare (EW) system. The system is anticipated to be internal to the aircraft although mounted pod variants are used in certain circumstances. The commercially developed system software and hardware is UNCLASSIFIED. The system is classified SECRET when loaded with a U.S. derived EW database.

8. Embedded GPS-INS (EGI) LN-260 is a sensor that combines GPS and inertial sensor inputs to provide accurate location information for navigation and targeting. The EGI LN- 260 is UNCLASSIFIED. The GPS cryptovariable keys needed for highest GPS accuracy are classified up to SECRET.

9. AN/APX-126 Advanced Identification Friend or Foe (AIFF) Combined Interrogator Transponder (CIT) is a system capable of transmitting and interrogating Mode V. It is UNCLASSIFIED unless/until Mode IV and/or Mode V operational evaluator parameters are loaded into the equipment. Elements of the IFF system classified up to SECRET include software object code, operating characteristics, parameters, and technical data. Mode IV and Mode V anti-jam performance specifications/data, software source code, algorithms, and tempest plans or reports will not be offered, released, discussed, or demonstrated.

10. Modular Mission Computer (MMC) 7000AH is the central aircraft computer of the F-16. It serves as the hub for all aircraft subsystems and avionics data transfer. The MMC 7000AH hardware and software are classified SECRET.

11. Improved Programmable Display Generator (iPDG) and color multifunction displays utilize ruggedized commercial liquid crystal display technology that is designed to withstand the harsh environment found in modern fighter cockpits. The display generator is the fifth generation graphics processor for the F-16. Through the use of state-of-the-art microprocessors and graphics engines, it provided orders of magnitude increases in throughput, memory, and graphics capabilities. The hardware and software are UNCLASSIFIED.

12. AN/AVS-9 Night Vision Goggles (NVG) are 3rd generation aviation NVG offering higher resolution, high gain, and photo response to near infrared. Hardware is UNCLASSIFIED, and technical data and documentation to be provided are UNCLASSIFIED.

13. KIV-78 is a crypto applique for IFF. The hardware is UNCLASSIFIED unless loaded with Mode 4 classified elements.

14. AN/ARC-238 radio with HAVE QUICK II is a voice communications radio system and

considered UNCLASSIFIED without HAVE QUICK II. HAVE QUICK II employs cryptographic technology that is classified SECRET. Other waveforms may be included as needed. Classified elements include operating characteristics, parameters, technical data, and keying material.

15. LAU-129 Guided Missile Launcher is capable of launching a single AIM-9 (Sidewinder) family of missile or AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM). The LAU-129 launcher provides mechanical and electrical interface between missile and aircraft. There are five versions produced strictly for foreign military sales. The only difference between these launchers is the material they are coated with or the color of the coating. This device is UNCLASSIFIED.

16. Laser JDAM (Joint Direct Attack Munitions) (GBU-54/56) is a Joint Service weapon and has the capability to engage targets moving at up to 70 mph. The LJDAM weapon consists of a DSU-38/40 sensor, a JDAM guidance set installed on either a non-thermal or thermal coated bomb body; and fuze. The DSU-38/40 consists of a laser spot tracker (same size and shape as a DSU-33 proximity fuze), a cable connecting the DSU-38/40 to the basic JDAM guidance set, a cable cover, cable cover tie down straps, modified tail kit door and wiring harness, and associated modified JDAM software that incorporates navigation and guidance flight software to support both LJDAM and standard JDAM missions. FMU-152A/B, FMU-139 (all variants) and dummy fuzes are the standard fuzes to be used with this weapon. The quantities in this notification are for testing and integration effort. The weapons components are UNCLASSIFIED. Technical data and countermeasures/vulnerabilities are SECRET. The overall classification is SECRET.

17. MK-82 inert General Purpose (GP) bomb is a 500 pound, inert, free-fall, unguided, low-drag weapon usually equipped with the mechanical M904 (nose) and M905 (tail) fuzes or the radar-proximity FMU-113 air-burst fuze. The MK-82 is designed for soft, fragment sensitive targets and is not intended for hard targets or penetrations. The explosive filling is usually tritonal, though other compositions have sometimes been used. The overall classification of the weapon and 904/905/FMU-113 fuzes are UNCLASSIFIED.

18. M61 20mm Vulcan Cannon is a six-barreled automatic cannon chambered in 20x120mm with a cyclic rate of fire from 2,500-6,000 shots per minute. This weapon is a hydraulically powered air cooled Gatling gun used to damage/destroy aerial targets, suppress/incapacitate personnel targets and damage or destroy moving and stationary light materiel targets. The M61 and its components are UNCLASSIFIED.

If a technologically advanced adversary were to obtain knowledge of the hardware and software elements, the information could be used to develop countermeasures or equivalent systems, which might reduce system effectiveness or be used in the development of a system with similar or advanced capabilities.

20. A determination has been made that the recipient can provide substantially the same degree of protection for the sensitive technology being released as the U.S. Government. This sale is necessary in furtherance of the U.S. foreign policy and national security objectives outlined in the Policy Justification.

21. All defense articles and services listed in this transmittal have been authorized for release and export to the recipient.

[FR Doc. 2019-27042 Filed: 12/13/2019 8:45 am; Publication Date: 12/16/2019]